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Total Number of Pages: 01

B.TECH
PCBT4301

5th Semester Regular / Back Examination 2015-16
IMMUNOLOGY AND IMMUNOTECHNOLOGY

BRANCH: Biotech

Time: 3 Hours

Max marks: 70

Q.CODE: T249

Answer Question No.1 which is compulsory and any five from the rest.

The figures in the right hand margin indicate marks.

- Q1** Answer the following questions: **(2 x 10)**
- a)** Which properties do the T-cell receptor and the antibody share in common?
 - b)** What is MHC polymorphism? How is MHC polymorphism thought to be generated?
 - c)** What is passive immunity? Give examples of naturally and artificially acquired passive immunity?
 - d)** What do you mean by ADCC?
 - e)** What is ELISA? Write the name of different types of ELISA?
 - f)** What do you mean by anaphylaxis?
 - g)** What is HAT medium? Why it is used?
 - h)** Which immunoglobulin is the principal one found in secretions such as milk?
 - i)** Which type of immunoglobulin class is more effective in bringing about complement mediated lyses?
 - j)** How the two type of light chain of antibody molecule are distinguished?
- Q2** Differentiate between:
- a)** Monoclonal and polyclonal antibody **(5)**
 - b)** Humoral and cell-mediated immunity **(5)**
- Q3** What is an antigen? Discuss the various factors that influence immunogenicity **(6+4)**
- Q4** What do you mean by dysfunction of the immune system? How the dysfunction is modulated in human? **(6+4)**
- Q5**
- a)** Describe about different types of innate defense barrier of human body? **(5)**
 - b)** What are immunoproliferative diseases? Explain with examples? **(5)**
- Q6** Briefly explain
- a)** Organization of immunoglobulin genes. **(5)**
 - b)** Central tolerance. **(5)**
- Q7**
- a)** "Write in detail about structure of MHC molecules?
 - b)** Write notes on secondary lymphoid organs?
- Q8** Write short notes on any two:
- a)** Vaccinology **(5)**
 - b)** Discuss about Gell and Coombs methods of classification of Hypersensitivity reaction. **(5)**